

ABSTRACT

The bacterial gene (opd) encodes an organophosphorus anhydrase which is capable of hydrolyzing a wide spectrum of neurotoxins ranging from insecticides to mammalian neurotoxins. The cloned gene has been expressed in a number of hosts and the purified enzyme has been characterized. These advances have led to a number of interrelated uses for the cloned gene and the recombinant enzyme including: detoxification of organophosphorus compounds; detection of organophosphorus compounds; protection of susceptible organisms from organophosphorus poisoning; and, detection of organophosphorus-detoxifying microorganisms.

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